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LIBRARY JOURNAL®

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Info Safety Net: Depository Libraries

LIBRARY AUTOMATION MARKETPLACE

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Automating a library can present lots of problems. LJ*'s "Automated System Marketplace 1987" (p. 33-44) sorts out the players so librarians can tell which vendor and which system is right for them. Illustration by Trish Burgio*

Letters 8
Calendar 13
People 31
Professional Reading 64
Checklist 66
Magazines 70
Buyers' Guide 72
AV Reviews & Distributors 74
Library Best Sellers 112
Classified 102
Index to Advertisers 111

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FEATURES

Automated System Marketplace 1987: Maturity and Competition 33
Who's buying what and other trends / by Robert A. Walton & Frank R. Bridge

Magazine Madness: the Best Magazines of 1986 & 1987 45
New periodicals libraries should add / by Bill Katz

GPO's Depository Library Program: Building for the Future 52
DLP as an information "safety net" / by Peter Hernon & Charles R. McClure

Subscription Agencies: a New Look at an Old Service 57
How agency and library relate / by N. Bernard Basch & Alice Sizer Warner

COLUMNS

Online Databases: *Five Years into the Past* 62
Five Years into the Future / by Carol Tenopir

EDITORIAL

Should Librarians Support NCLIS? 6
NCLIS hostility to librarians and ALA

LATE BULLETINS 15

NEWS 16

House subcommittee against NTIS privatization / Art Libraries Society meets in Dallas / Oklahoma library district loses tax money / Valentine's gifts from Jefferson Cty. Lib. / Georgia State Univ. tops one million volumes / Anarchist collection to LC / Library study-in at Fordham / Owens honors Black History Month / LJ/SLJ *Conference Daily announced / Book Notes / UC-Davis endows chair for librarian / $67 million bond issue endorsed in Seattle / Automation Roundup / Milwaukee special services to homeless / Pratt lecture series on commoditization of information*

BOOK REVIEW 78

James A. Bill's *The Eagle and the Lion: America and Iran* p. 78 / *Encyclopedia of American Religious Experience: studies of traditions and movements* p. 79 / David Brinkley's *Washington Goes to War* p. 84 / Eric Foner's *Reconstruction: America's unfinished revolution, 1863–1877* p. 84 / William Kennedy's *Quinn's Book* p. 97 / and more ....

Market shares and emerging trends in the library automation industry

Automated System Marketplace 1987:

Maturity and Competition

By Robert A. Walton & Frank R. Bridge

DURING CALENDAR YEAR 1987, the library automation marketplace witnessed the installation of 302 automated systems in libraries, the largest number of installations ever during any one year. This expanded annual review of the library automation marketplace takes a closer look at each of the major library automation firms and products—what libraries were buying—and what, if any, trends emerge. These will set the course for how vendors may perform during 1988. This article focuses on the overall library automation industry, particularly market shares and emerging trends. A second study, to be published at a future date in *LJ*, provides an inside look at each of the major vendor firms—their corporate personalities, products, and customers.

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Impressive growth

While the automation marketplace has grown steadily since 1982, growth in the number of systems installed during 1987 significantly exceeded the estimates of most library automation experts. The 302 systems installed in libraries by turnkey and software-only vendors (those identified in the Source List, p. 44) reflect a 56 percent growth rate over the 193 systems installed during 1986, which had itself been a record year. While prior-year installations indicated a continued growth of the market, the sizeable gains in 1987 took many by surprise. This was particularly true for a few of the major market share vendors who had predicted a slow down and leveling off in market growth, based largely on receiving fewer Request for Proposal documents from libraries.

While there continues to be much speculation about the sharp upturn in 1987 systems installed, most experts attribute this growth to the continuing decline in the cost of computer equipment. They argue that as prices continue to drop and automated library systems become more "affordable," an increasing number of libraries find automation financially attractive and politically acceptable to funders. This argument appears to have merit considering that smaller system installations, those having between one to 16 terminals, grew from 43 percent of systems installed in 1986 to 65 percent for 1987. An alternative theory proposes that most vendors have now added the missing software modules to their integrated systems, particularly acquisitions and serials control. As these products matured, so too has the confidence level of library managers as they consider the risk of an investment in automation.

"Fast track" vendors

Perhaps resulting from the number of 1987 installations, several major library automation vendors found their historic, dominant market share positions less secure. This downward shift in overall market share was particularly noticeable for CLSI, the largest vendor in the marketplace. As shown in Chart 1, during 1987, CLSI's total market share (all systems installed during all years) dropped six percent, from 28 percent (1986) to 22 percent (1987). This represents a major loss in market position and indicates that competitors were particularly effective in winning library installations that traditionally had purchased CLSI systems. With 309 installed systems, CLSI's position of overall market share leader was shaken, but remains firm.

The second place position, however, is less stable. Geac, historically the second largest vendor in the industry, also suffered losses during 1987 and is being closely pursued by OCLC and DYNIX. While not as dramatic a drop as CLSI, Geac also suffered an overall market share decrease, down three percent from 14 percent (1986) to 11 percent (1987).

Where there are significant market share "losers," there are usually

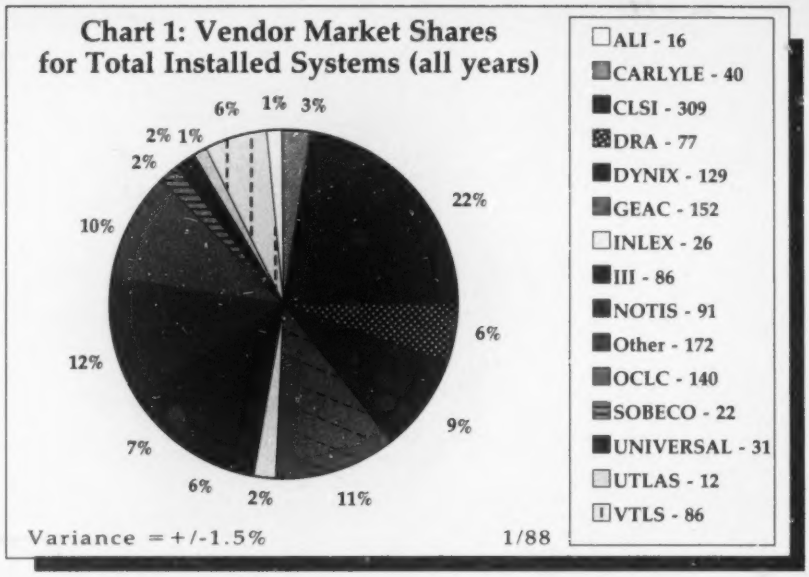
corresponding market share "winners." Undoubtedly, the big winner for 1987 was DYNIX, the fastest growing company in the industry. While DYNIX has been an increasing presence in the marketplace for several years, during 1987 DYNIX established itself as the leader of an emerging group of "fast track" vendors, companies showing aggressive and impressive gains in the number of systems installed. DYNIX increased its overall market share by three percent, from six percent (1986) to nine percent (1987). As shown in Chart 2, one of every five automated library systems installed during 1987 was a DYNIX system. Joining DYNIX as fast track vendors in growing market shares were Carlyle and INLEX, each making significant increases in installed systems during 1987.

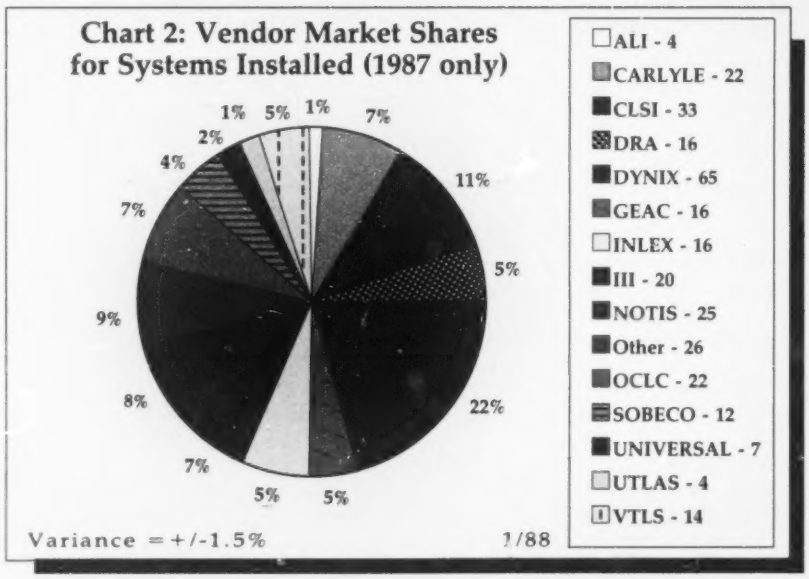
At a time when some vendors claim the market is too competitive for newcomers, 1987 saw the introduction of several new companies to this analysis. Innovative Interfaces, Inc. (III), expanding upon its well-recognized and historical successes in automated acquisitions and serials control, expanded its system and introduced two new modules—the online public access catalog (OPAC) and circulation control. The addition of these software functions places III in the mainstream of the turnkey vendor marketplace and guarantees inclusion of its installations in the marketplace analysis. Based on III's performance during 1987, this company seems destined to be included among the fast track firms that may dominate the 1988 marketplace.

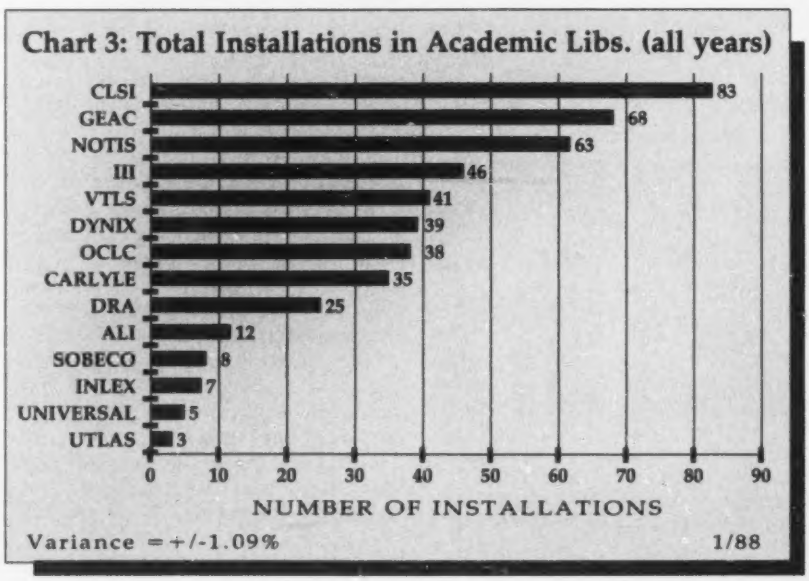
Advanced Libraries and Information, Inc. reentered the marketplace after a long sabbatical, showing a respectable four installations. Sobeco, a Canadian corporation, initiated an active marketing campaign in the United States breaking into the marketplace with an impressive four percent market share for the year. There seems to be little refuge for those established vendors who claim the marketplace is too active and whose prophecy is that extreme competitiveness may, in fact, be dangerous for the long-term stability of library automation. Clearly, many librarians do not agree.

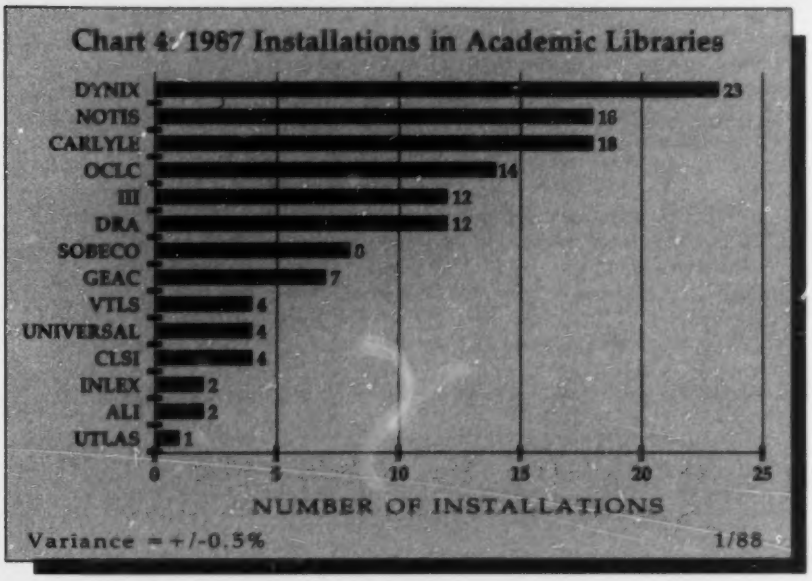
Installations

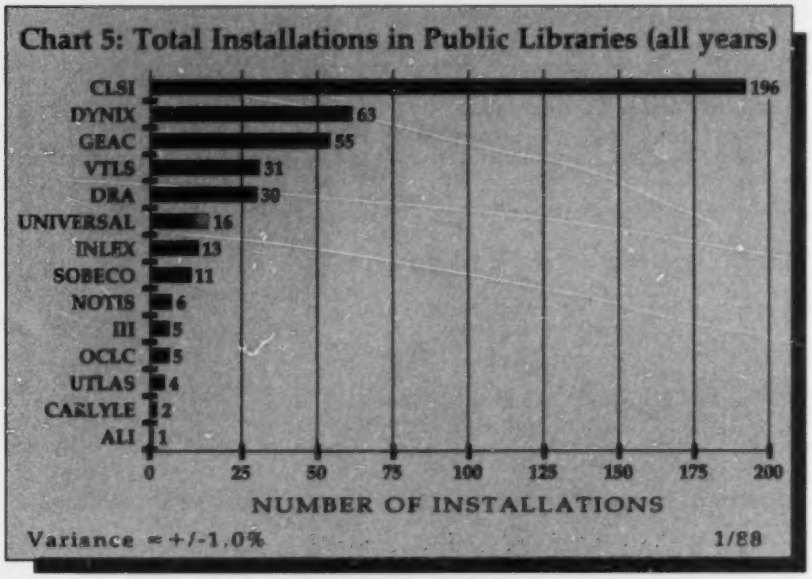
Overall market shares (installations for all years) remained stable for both academic libraries (Chart 3) and public libraries (Chart 5). Because of the large number of historic installations, CLSI retained the lead position in overall market share for

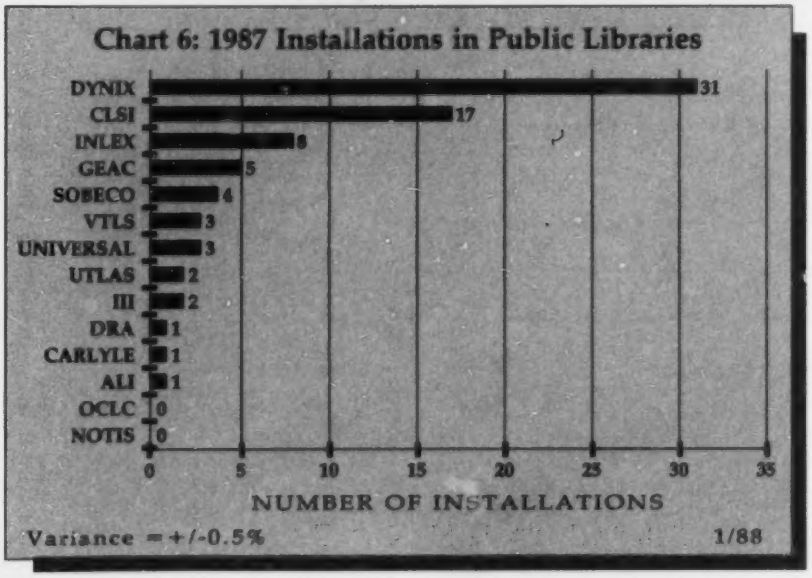












both types of libraries. Installations during 1987, however, show yet another major shift in vendor market positioning.

During 1986, NOTIS and OCLC dominated the academic portion of the marketplace installing twice as many systems as the next two competitors, DYNIX and Carlyle. As shown in Chart 3, however, 1987 installations market positions reversed with DYNIX leading in academic library installations, followed by Carlyle and NOTIS tied for the second position, and OCLC falling to the fourth position. Although Carlyle has always been particularly strong within the academic marketplace, the industry was taken by surprise by DYNIX. DYNIX advanced to the lead position, and thereby clearly debunked the premise that it was only suitable for public libraries. Although tied for second position, NOTIS remains firmly established as the primary vendor of large, academic, and research libraries.

Shifts in market shares for 1987 public library installations followed a similar pattern. As shown in Chart 6, DYNIX established an overwhelming lead position during 1987, displacing CLSI to accept a distant second-place position. INLEX showed significant improvement, moving up to the third position from the seventh position it occupied during 1986. Surprisingly, DRA installed only one public library system during 1987.

What can account for the tremendous surge in popularity of DYNIX during 1987? One probable explanation is the substantial growth in the proportion of smaller systems installed during that year. As shown in Chart 7, the number of smaller systems exceeded those of medium and large systems combined (Charts 8 and 9). It is likely that the trend of an increasingly active smaller system marketplace will continue, giving a competitive edge to vendors such as DYNIX, CLSI, III, and INLEX, who use minicomputers that provide particularly strong cost/performance on systems supporting smaller numbers of terminals.

NOTIS retains its unshakable position of king of the large system marketplace. Even though this system has only been actively marketed for half of the years that CLSI and Geac have, NOTIS now has the largest total installed base of large systems. It sells two to three times as many large systems each year as these second- and third-place competitors combined. Strangely, as with its decline in public library installations, DRA also lost ground in the

large system market segment, falling from eight installations in 1986 to three in 1987.

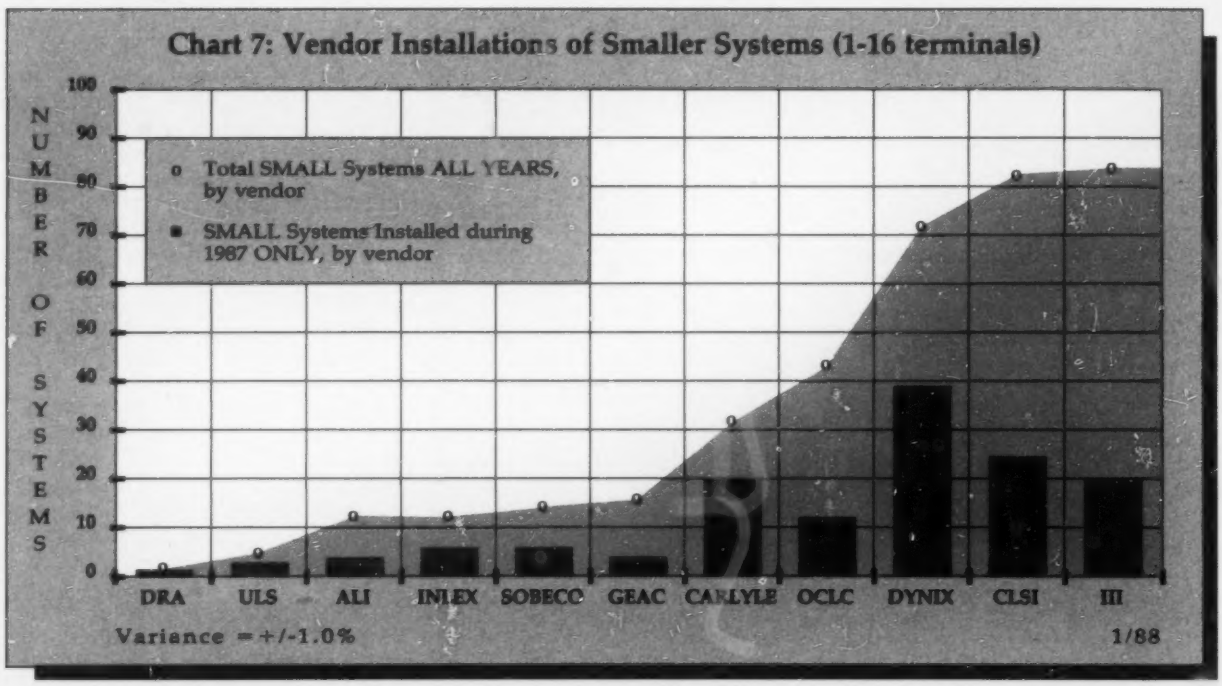
The foreign marketplace

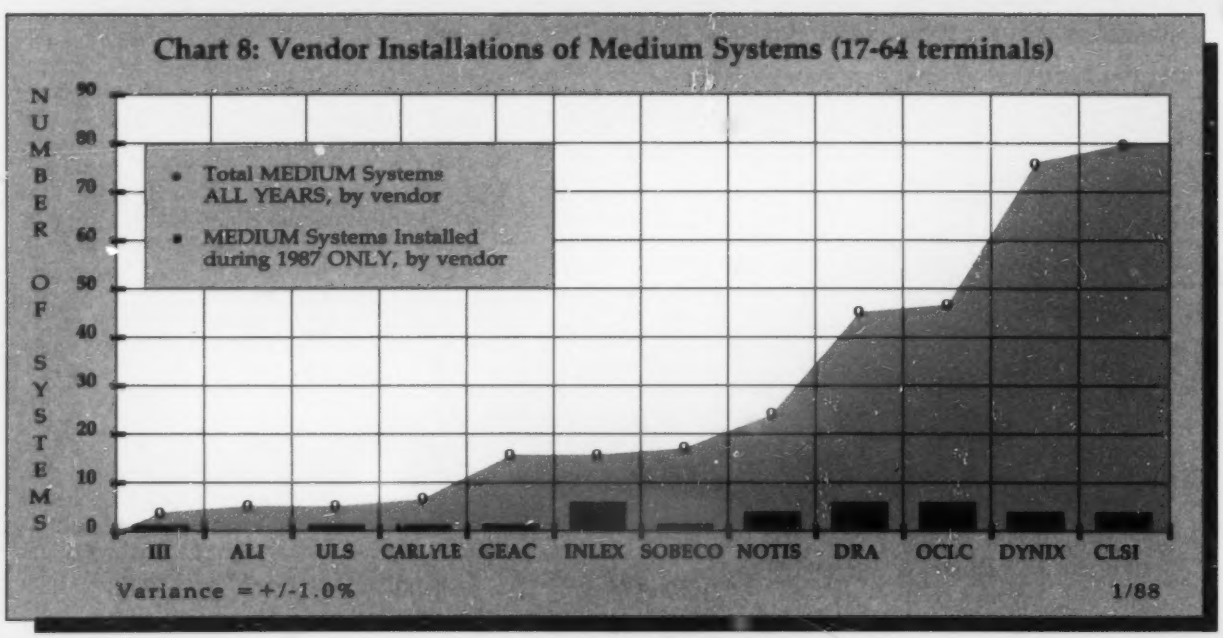
While the number of domestic installations for 1987 showed sizable growth over that during 1986, some credit for an extremely "hot" '87 marketplace must be attributed to an even faster growing foreign marketplace. Of the top ten vendors, nearly all have opened one or more foreign sales offices or have signed distribution agreements with foreign brokers. As shown in Chart 10, most of the foreign sales are divided between Europe and Canada. Hidden from view, however, is the intense competition for installations in Australia and New Zealand—the geographic region that surfaced as the most active and competitive foreign marketplace during 1987.

Another strange turn is the fact that the United States became a foreign marketplace during 1987. The Canadian company Sobeco joined Utlas, Geac, and Universal Library Systems—also Canadian—in more aggressively marketing their products in the United States. Except for Geac, none of these firms have individual overall market shares that are extraordinary, but these smaller Canadian firms collectively captured 16 U.S. installations during 1987—further eroding market share for some of the major domestic vendors. It is anticipated that these Canadian companies will continue to be extremely assertive during 1988.

Special milestones

At long last, public schools began to explore library automation seriously. Historically, most school libraries have purchased and installed





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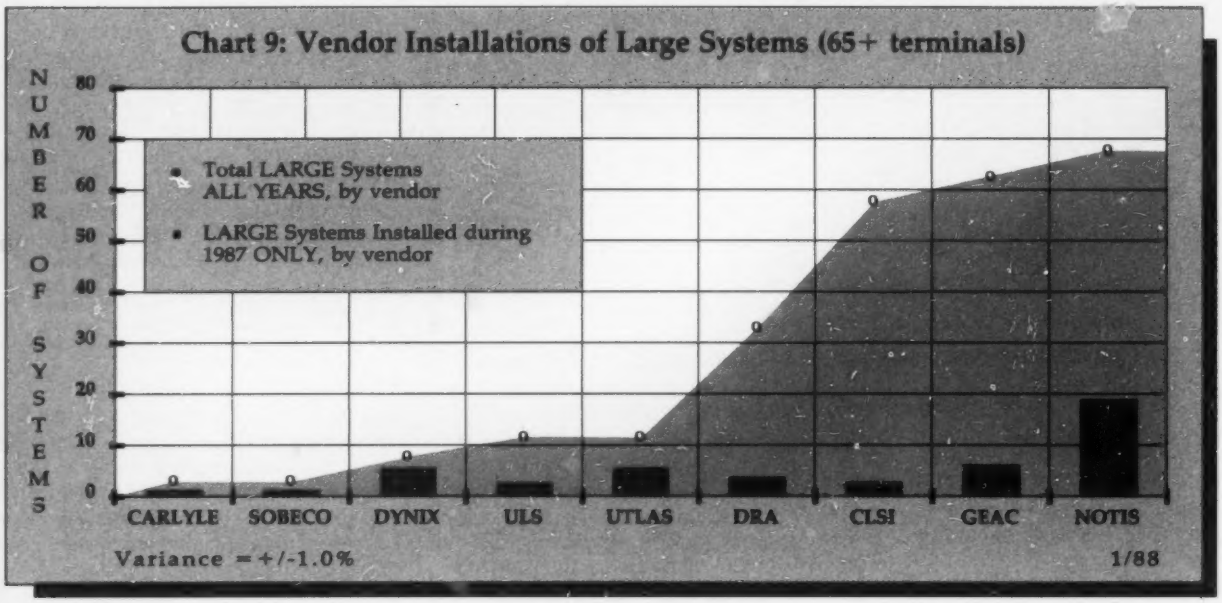


microcomputer-based circulation systems. During 1987, however, several large school districts moved ahead with the installation of minicomputer-based, integrated library systems. As shown in Chart 11, some familiar vendor names captured this public school business. Leading the way in this new market was, again, DYNIX. Falling in close behind was INLEX, another 1987 fast track vendor. Increasingly, school district administrators are seeing the potential for curriculum enhancement by the coordinated, collective automation of school libraries, and 1988 promises to continue the investment of these institutions in large-scale library automation.

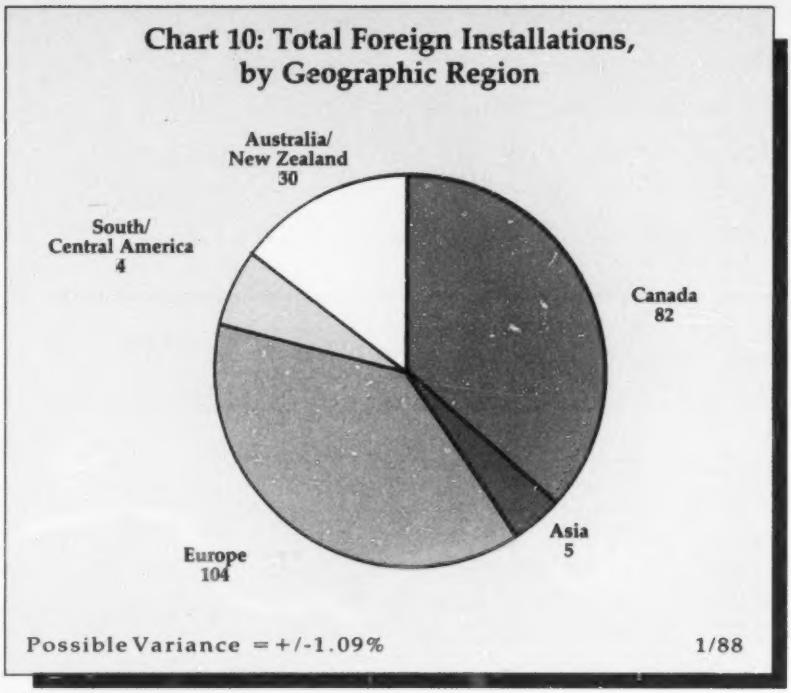
As shown in Table 1, vendors have now ported (moved) their software to operate on virtually every major brand of computer equipment. Emerging as the most popular are computers manufactured by the Digital Equipment Corporation (DEC). The DEC VAX series of computers is particularly popular among academic and government institutions and may, over time, give a slight edge to vendors offering software designed for this hardware.

Another interesting trend is the growing interest shown by some library automation vendors in nonproprietary operating systems. All library software must work in unison with, and therefore be dependent on, the operating system of a computer system. Historically, most operating systems have been proprietary—able to operate only on one type of equipment or, in some cases, only on selected models within the same brand of equipment. The data processing industry is now, slowly, moving toward nonproprietary operating systems, software that is machine independent indicating that it can operate on a wider variety of computer brands.

The most popular nonproprietary operating systems/utilities are UNIX and PICK, each of which can operate on more than 30 different brands of computer hardware. As shown in Table 2, several vendors are now offering software that uses one of these two operating systems, giving them more flexibility to support different types of computers and, in doing so, becoming more competitive. Particularly noteworthy is the decision by CLSI to move away from the proprietary CLSI operating system to UNIX, broadening CLSI's competitive ability.

After years of anticipation and user demands, system vendors are now offering a wider selection of system interfaces—the ability for a turnkey, automated library system to directly and electronically communicate with other vital computer systems, such as cataloging utilities and acquisitions jobbers. Table 3 illustrates the wide range of choices now available in connecting the local automated library system to cataloging vendors.

While most vendors have previously offered interactive, online connections to the major bibliographic utilities, such as OCLC, RLIN, and WLN, the ability to transfer records electronically has now expanded to encompass many of the private cataloging services and jobbers. Unfortunately, as seen in Table 4, the ability to electronically capture serials and acquisitions records falls far short of industry needs. Only one company, III, provides electronic links to most acquisitions and serials jobbers, based largely on its history of strength in these two subsystems. While most vendors are actively



working on these interfaces, it will probably be several more years before they are commonplace.

After much bantering by library automation consumers and consultants, the vendor community is slowly migrating its software toward what can be loosely called "industry standards." Without exception, success in the current marketplace requires the ability to fully support one or more of the flavors of the MARC standard. As shown in Table 5, most vendors now recognize and accept most of the different versions of MARC, an absolute priority if the vendor anticipates any competitiveness in the academic marketplace.

Going more slowly is the vendor migration toward developing software that meets the specifications of the protocol layers for the open systems interconnection model. The Open Systems Interconnection (OSI) Reference Model (ISO 7498) of the International Organization for Standardization specifies the functional responsibilities for each of two or more computers that desire to communicate. The model, which divides these communication protocols into a seven-layered process, is as confusing as it sounds and not generally understood by the library profession. These standards are important, nonetheless, and as increasing numbers of libraries have placed emphasis (in their RFPs) on vendor adherence to this model, vendors are slowly enhancing their software systems to meet these special protocols.

What is too big/too little

Perhaps the final, important realization in looking back to 1987 is that the classifying of vendors by system size is beginning to fade. Many of the vendors are now supporting different levels (in some cases different types) of computer hardware, primarily to give them a great cost performance advantage in competing for business among different sizes of libraries. As shown in Table 6, except for Eyring and Utlas, all of the vendors have experience in small systems. With the exception of III, all of the vendors have experience with very large systems. So, in the final analysis, the barriers of "big system vendor" and "little system vendor" are breaking down—it is a more open and generally competitive marketplace.

Vendor profiles

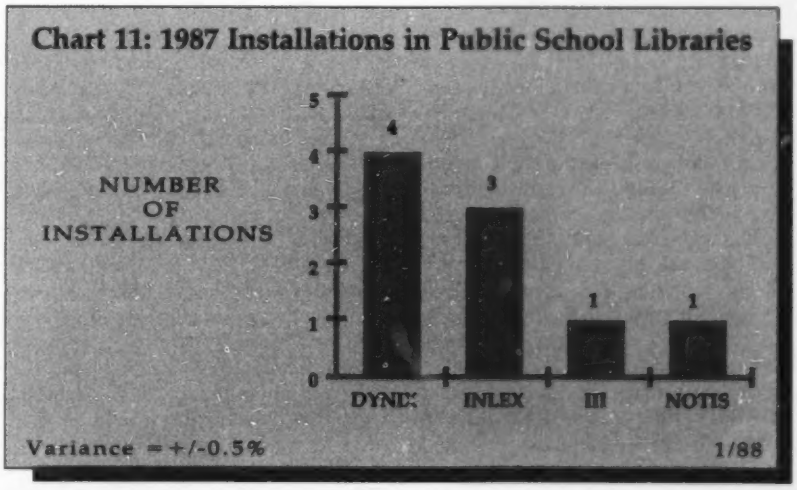
Market shares aside, what were the milestones of the major vendors during 1987? How did they fair against the goals they set for themselves at the end of 1986?

Advanced Libraries & Information

Advanced Libraries & Information, Inc. was established and made its initial entry into the marketplace during 1987. During 1988, the company must move from a research and development mentality to an active marketplace participant, emphasizing marketing and sales. No specific installation goals have been published for 1988, but in the judgment of the authors, the company must show a measurable increase in overall market share if it is to remain viable and be taken seriously by library customers, much like Carlyle and INLEX did during 1987.

Carlyle

Nineteen eighty-seven was a very good year for Carlyle. Surprisingly, the company met each of the aggressive goals published in the last marketplace analysis. Annual revenues tripled, the number of systems installed doubled, and the company posted a profit during each quarter in 1987. In an effort to maintain continuity of service, Carlyle staffing has more than doubled—a necessity if the company is to be successful in supporting its fast-growing client base. For 1988, Carlyle managers have prudently established more modest goals. Carlyle software will be expanded to include (completed) acquisitions and serials control modules, and the introduction of CD-ROM technology, an option of necessary interest to most of the major vendors.



"After much bantering by library automation consumers and consultants, the vendor community is slowly migrating its software toward what can be loosely called 'industry standards.' Without exception, success in the current marketplace requires the ability to fully support one or more of the flavors of the MARC standard"

"Market Share . . . how is it counted and why is it important?"

TRADITIONAL BUSINESS practice uses market share analysis to quantify growing, stable, and declining vendor firms in a defined industry. It is also valuable in identifying changing trends and priorities in customer behavior. The goal of the *LJ* annual library automation marketplace analysis is analogous: to collect, describe, and analyze the activities of the library automation turnkey and software-only vendors and their customers for the year 1987.

Thus, vendors may gain a better understanding of how they performed in comparison with other vendors, and, perhaps more importantly, how well the competition performed. Librarians use the market share information to identify which vendors and products were popular with comparable institutions, to identify the up-and-coming vendor firms, and as a foreshadowing of vendors in trouble. By examining the marketplace it is possible to gain a view of the entire industry and put the failure or successes of any vendor or library in perspective.

But how is marketplace counted? Where do the figures come from? Herein lies the problem. There are widely differing opinions about the best method of counting and assigning portions of the marketplace "pie." Historically, *LJ*'s marketplace articles have defined the size of each vendor's market shares based upon the number of computer systems installed by that company. Once all of the systems installed by all vendors have been calculated, proportional market shares are assigned.

This traditional methodology has its critics, including the authors. By assigning market shares based on the number of installed systems, the implication is that all installations are of a similar size and represent equivalent economic units for the library automation industry. This is obviously untrue. If, for example, Vendor A installs four smaller automated library systems (12-16 terminals each) and Vendor B installs one very large automated library system (125-150 terminals), Vendor A will receive a much larger market share value than Vendor B. This is unfair since the one system installed by Vendor B is certainly equivalent in value and industry economic significance to all systems installed by Vendor A.

So . . . how do other industries handle this problem in assigning market shares? Wherever possible, market shares should be assigned on the basis of gross corporate revenues. Instead of looking at an artificial comparison of products which may have different values, some industries simply compare the gross amount of money flowing into each vendor. Mike Mellinger, president of Data Research Associates, Inc., has long advocated the use of revenues for calculation of library automation market shares. The authors also subscribe to this approach but, unfortunately, over 90 percent of the vendor firms in this industry are privately held and will not release these financial figures for publication. Secondly, it is not possible to confirm independently most revenue data provided by vendors, while it is possible to verify vendor installations by talking directly to customers. For these reasons, the number of systems installed remains the best indicator available for assigning library automation market share.

Company	'87 Revenues
Data Research	$8,806,000
Geac	42,000,000
III	5,000,000
NOTIS, Inc.	1,408,132
OCLC—Local Systems	10,349,681
Universal Lib. Systems	2,281,695
Utlas	16,000,000
VTLS	3,000,000
Total reported revenues of vendors not releasing individual figures for publication	116,900,000
Total Estimated Industry Revenues	$205,745,508

If installation comparisions are not the ideal marketplace measure, how can unfair marketplace comparisons be minimized? Again, as with other industries, the best way to avoid unfair comparisons of vendor activity is to provide detailed marketplace comparison instead of relying only on aggregate installation comparisons. By presenting additional vendor market share analysis by type of library, size of system installed (based upon number of terminals), and by geographic location, readers will have the information necessary to independently identify different vendor strengths and weaknesses in selected segments of the marketplace.

Table 1
Hardware Availability

Manufacturer	Model	Vendor
Altos	2000	CLSI
Amdahl	all	NOTIS
C.Itoh	50	Advanced Library Systems
	150	Advanced Library Systems
	250	Advanced Library Systems
	350	Advanced Library Systems
	550	Advanced Library Systems
Control Data	Omega series only	NOTIS
Convergent Technologies	5320	Innovative Interfaces
	5640	Innovative Interfaces
Data General	C350	OCLC-LS/2000
	MV/XXXX Series	OCLC-LS/2000
	S/XXX Series	OCLC-LS/2000
Digital Equipment Corporation (DEC)	PDP 11/XX Series	CLSI
	PDP 11/XX Series	OCLC-LS/2000
	PDP 11/XX Series	Universal Library Systems
	VAX Series	Advanced Library Systems
	VAX Series	DRA
	VAX Series	DYNIX
	VAX Series	Sobeco/Multilis
	VAX Series	Universal Library Systems
Formation	400 only	NOTIS
Fujitsu		Advanced Library Systems
Geac	6000	Geac
	8000	Geac
	9000	Geac
Hewlett Packard	3000	Inlex
	3000	VTLS
Honeywell	DPS/6	DYNIX
	DPS/6	Advanced Library Systems
IBM	370	DYNIX
	9370	DYNIX
	30XX Series	NOTIS
	370 Series	NOTIS
	43XX Series	NOTIS
	937X Series	NOTIS
Innovative Interfaces	INNOVACQ	Innovative Interfaces
Intel	DPX	Carlyle
McDonnel Douglas	any w/PICK OS	Advanced Library Systems
	any w/PICK OS	DYNIX
Magnuson	all	NOTIS
Motorola Four-Phase	311 & 312 only	NOTIS
Natl. Advanced Systems	all	NOTIS
NCR	Tower 21	Multilis
Nixdorf	all	NOTIS
Prime	any w/PICK OS	Advanced Library Systems
	any w/PICK OS	DYNIX
Sequent	B 21	CLSI
	B 8	CLSI
	S 27	CLSI
	S 81	CLSI
Sequoia	any w/PICK OS	Advanced Library Systems
Tandem	CLX	Eyring
	Nonstop Series	Utlas
	Nonstop Series	Eyring
	TXP	Eyring
	VLX	Eyring
Ultimate	1400	DYNIX
	3000	DYNIX
	6000	DYNIX
	7000	DYNIX
Unisys	6	Pueblo
	8	Pueblo
	10	Pueblo
	90/XX Series	Pueblo
Wyse	2108	CLSI

Nineteen eighty-eight will be an important year for Carlyle as libraries watch to see if the company can maintain its fast track growth while keeping its new customers happy.

CLSI

CLSI is a company in transition . . . an innovative (while difficult) position for any marketplace leader. The company has rebuilt its management team and philosophy, and charted a new multiyear course for its products. With over 300 systems installed, CLSI has announced an aggressive plan to migrate all of its proprietary software products to the UNIX operating system and, during this process, improve its adherence to industry standards.

This is an important move for CLSI and absolutely necessary if the company is to stop the erosion of its market share and thus hold its leading position in the industry. For any company, this type of major software redevelopment is quite difficult, but it will be particularly so for CLSI. The company is confronted with the reality that this new software development effort must also include a reasonably priced transition alternative for its many older customer institutions—many of which now operate on older computer hardware and software technologies, some with aging and nonstandard databases. While an aggressive strategy by any measure, CLSI has pulled together the human and financial resources necessary to make a strong showing. Its performance in 1988 will, in large part, measure the library community's acceptance of this new plan from the industry's oldest and most successful vendor.

Data Research Associates

During 1987, DRA passed benchmark tests at the two largest public libraries to automate to date, Los Angeles County Public Library and the Queens Borough Public Library, N.Y. The company continues to be successful with large library installations based upon the strong performance of its processor cluster architecture, based upon the DEC VAX computers. Like several other vendors, DRA completed and installed several final modules to its ATLAS software system, including acquisitions, serials control, and authority control. Academic libraries favored DRA over public libraries during 1987, accounting for more than 75 percent of new installations. No major

"There seems to be little refuge for those established vendors who claim the marketplace is too active and whose prophecy is that extreme competitiveness may, in fact, be dangerous for the long-term stability of library automation. Clearly, many librarians do not agree"

software releases are planned for 1988. DRA considers all of the basic software modules of the ATLAS system complete, and development staff will be focusing on cosmetic and user friendly enhancements and will endeavor to incorporate the emerging Common Command Language and interlibrary loan standards.

DYNIX

As the flagship vendor of the 1987 marketplace, DYNIX devoted most of its effort to successfully managing the installation of a very large number of new customer systems, at a rate of more than one each week. DYNIX also broke new ground on several different fronts. The company successfully migrated its software and completed customer installations on two new computer systems, the DEC VAX and the IBM 9370 series. These two types of hardware are the most popular in the data processing industry and will, undoubtedly, add to DYNIX's marketing momentum for 1988.

The company also broke its misleading stereotype as a "small library vendor," successfully passing a 200+ terminal benchmark test for the New Orleans Public Library. In 1988, energies will be focused primarily on maintaining customer satisfaction, and the completion and field installation of the serials control software module.

Geac

During 1987, the Geac Corporation once again became financially seaworthy and reentered active marketplace participation. Based on strong support from its customer base and its affiliation with a new investment partner, Helix Investments Ltd. (Toronto), interim receivership was lifted from Geac's shoulders during October 1987. Geac is now in the process of regaining the offense, having significantly expanded its U.S. sales force and initiated a new marketing and sales campaign. Proper recovery from the type of financial problems experienced by Geac will take time, and its success during 1988 will be better indicated by increased profitability than by increased market share.

INLEX

As another of the 1987 fast track vendors, INLEX devoted much of its effort to installing new customer systems. Advances were also made in completing several circulation and bibliographic maintenance functions that had been outstanding from the INLEX software. Other notable improvements included the release of the PC-backup workstation and the expansion of INLEX's written documentation. In addition to concentrating on continued growth, INLEX plans to release the acquisitions and serials control modules for field installation during 1988.

Table 2
Operating Systems

System	Release	Vendor
Astro	3.3	Geac
CICS/VS		NOTIS
CLSI Proprietary	27.45	CLSI
Geos	1.6	Geac
GUARDIAN	B 40 B Series	Eyring Utlas
Hewlett-Packard MPE	all	VTLS
Hewlett-Packard MPE/V	U	Inlex
Intel RMX86	7	Carlyle
MIIS	5.3	LS/2000
MS/DOS	3	CLSI
MVS-IBM/370		NOTIS
MVS-IBM/XA		NOTIS
OS-IBM/VS1		NOTIS
P/OS	2	CLSI
PICK	7.6 7.6	Advanced Lib. Information DYNIX
PRIMOS (oper. PICK)		DYNIX
RSTS	7.2	Universal Library Systems
UCSD p-System	2	Innovative Interfaces
ULTRIX		Innovative Interfaces
UNISYS OS/3		Pueblo
UNIX	27.DBMS Version 3. 5.2	CLSI Innovative Interfaces Sobeco/Multilis
UNIX (oper. PICK)		DYNIX
VM-IBM (oper. PICK)		DYNIX
VMS (DEC oper. PICK)		DYNIX
VMS (DEC)	latest 4.6 all	DRA Sobeco/Multilis Universal Library Systems
VSE-IBM/DLIB		NOTIS
VSE-IBM/SP		NOTIS

Innovative Interfaces, Inc. (III)

With the release of its circulation control module during February 1987, III became an established vendor of a fully integrated library system. Once known primarily as a vendor of acquisitions and serials control systems, III made significant competitive advances in winning major accounts during 1987, including the University of California (San Diego) and the University of Oregon. III will undoubtedly broaden its appeal even further now that the company has completed a DEC OEM agreement and a migration of its software to run on the DEC VAX series of computers. Long ignored by library automation consultants, III has proven its ability to adjust to wider marketplace trends and is the vendor to watch in 1988.

NOTIS

NOTIS, the favored system of most large academic and research libraries, focused much of its 1987 energy on important and long-overdue organizational issues. Under the leadership of Jane Burke, NOTIS was incorporated as a wholly owned subsidiary of Northwestern University. The company furthered its independence by moving to new offices, purchasing a new research and development mainframe computer, and expanding its staffing by 46 percent. While continuing a pattern of strong sales during each of the past three years, NOTIS plans to concentrate on improving customer support and relations during 1988. NOTIS has clearly established itself as the dominant vendor for large online library systems.

OCLC—Local Systems

In reaction to the downfall of DataPhase, OCLC completed signing on a total of 46 DataPhase customers, providing each with system maintenance and support under the LS/2 designation. Although these customers retained their DataPhase systems software, these installations became OCLC customers, increasing their installed base from 94 to 140 libraries. In addition, OCLC introduced a wide range of new products during 1987, including a new authority control system to download LC MARC authority records, LS/2000 Biblio-Link (a companion program to Pro-Cite), and CD/2000, a new CD-ROM online catalog. Continuing its relationship with Data General, the computer manufacturer, OCLC became one of DG's top 15 accounts in the United States.

Sobeco (Multilis)

Sobeco, a Canadian-based company, entered the U.S. marketplace during 1987 with the installation of a system at the New Castle Public Library (Pa.). As a vendor of software based on DEC VAX computers and supported by the UNIX operating system, Sobeco has the necessary tools to be extremely competitive with the established vendors.

Universal Library Systems

Although Universal has participated in the marketplace for many years, recently the company has maintained a low profile and is not widely recognized by the general library community. Nineteen eighty-seven saw a change in this posture as Universal became increasingly active in competing for installations in the United States. The company provides libraries with another DEC VAX–based product and is one of the few vendors making strong advances in electronic interfaces with serials and acquisitions vendors. Given its recent mediocre sales performance, Universal has experienced an internal management reorganization and greatly expanded its marketing and sales force. The company has also converted to a publicly held firm (Canadian Exchange) and obtained sufficient financing to compete aggressively for an expanded overall market share during 1988.

Utlas

Utlas remains one of the smaller system suppliers, focused primarily on the installation of very large integrated library systems. During

Table 3
System Interfaces

Vendor	OCLC	RLIN	WLN	Utlas	Biblio-File	Auto-graphics	Marcive	Baker& Taylor	Brodart	Other Interface
Advanced Lib. & Info	x	x	x	x	x			x		
Carlyle	x	x	x	x	x	x			x	
CLSI	x	x	x	x	x	x(tape)	x(tape)	x(tape)	x(tape)	LSSI PICA (tape)
Data Research Assocs.	x	x	x	x	x	x	x	x	x	
DYNIX	x	x	x	x(tape)	x	x(tape)		x(tape)	x(tape)	
Eyring	x				x					
Geac	x	x	x	x	x	x		x	x	
INLEX	x		x							Laser Quest
Innovative Interfaces	x	x		x				x		BNA
NOTIS	x	x		x						
OCLC (LS/2000)	x									
Pueblo										Irving Network
Sobeco/Multilis	x			x	x			x	x	
Universal Lib. Systems	x	x	x	x	x	x		x	x	Natl. Lib. of Canada
Utlas	x	x		x						
VTLS	x	x	x	x(tape)	x	x	x(tape)	x(tape)	x(tape)	LSSI videodisc

Tape = data transfer via magnetic tape load only; not an interactive, online interface

Table 4
Serials/Acquisitions Interfaces

Vendor	OCLC	RLIN	WLN	Utlas	Faxon	EBSCO	Read	Brodart	Other
Advanced Libs. & Info.									
Carlyle					x				
CLSI									Menzies (UK)
Data Research Assocs.									
DYNIX									Baker & Taylor
Eyring									
Geac					x	x			
INLEX									
Innovative Interfaces	x	x		x	x	x		x	BNS, Coutts, Yankee Academic, Majors, Midwest, Heins
NOTIS	x				x				
OCLC (LS/2000)	x								
Pueblo									
Sobeco/Multilis									
Universal Lib. Systems					x				Bibbase Acq.
Utlas				x					
VTLS					x				Baker & Taylor

Table 5
Interfacing with MARC

Vendor	OSI Reference Model	LC MARC	OCLC MARC	RLIN MARC	US MARC	CAN MARC	AUS MARC	UK MARC	INTER MARC	UNI-MARC	UTLAS	Other Communication Standard
Advance Lib. & Info.		x	x	x	x	x	x	x	x	x	x	
Carlyle	levels 1-4 levels 5-7 will implement											Standard patron record, when available
CLSI	levels 1-3	x	x	x	x	x	x	x	x	x	x	
DRA	levels 1-5; levels 1-6 under development	x	x	x	x	x	x	x	x	x	x	NISO serials holdings, Boolean search, & Acq. Notices
DYNIX					x	x	x	x				BISAC SISAC-proposed; Summary serials holdings-proposed
Eyring			x									
Geac	levels 1-7 for records transfer	x	x		x	x	x	x	x			BISAC/SISAC X.25
INLEX	will implement when announced	x	x	x	x	x	x	x	x	x	x	
Innovative Interfaces	will commit as stds. announced											ASCII, RS232
NOTIS	under development	x	x	x	x	x	x	x	x	x		
OCLC LS/2000	levels 1-3 levels 4-7 under development	x	x	x	x	x	x	x	x	x		NISO serials holdings at summary level
Pueblo												
Sobeco/Multilis	planned				x	x					x	ISBD
ULISYS	under development					x	x					USMARC for holdings
Utlas	levels 1-5 under development	x	x									BISAC for data transmission
VTLS	under development				x		x	x				FIN MARC, LIBRIS MARC under development

Table 6
Size of Installations

Vendor	Smallest Library Installed		Largest Library Installed	
	Terminals	Titles	Terminals	Titles
Advanced Lib. & Info	1	15,000	200+	1,000,000
Carlyle	4	32,000	131	1,400,000
CLSI	3	21,427	275	982,960
Data Research Assocs.	10	273,000	430	4,193,000
DYNIX	4	10,000	200	650,000
Eyring	96	1,200,000	500+	2,700,000
Geac	3	30,000	240	1,600,000
INLEX	2	5,000	70	316,000
Innovative Interfaces	4	30,000	28	250,000
NOTIS	12	26,000	1000+	4,200,000
OCLC LS/2000	2	1,200	154	710,000
Pueblo	9	72,000	72	200,000
Sobeco/Multilis	4	10,000	200	2,500,000
Universal Lib. Systems	8	52,379	238	587,576
Utlas	20	80,000	225	2,500,000
VTLS	11	23,000	150	800,000

1987, Utlas signed on the last of the DataPhase ALIS-III sites and concentrated its resources on completing the full-acceptance test at the University of Toronto. Given its low number of sales during 1986 and 1987, it is probable that Utlas will fall below the one percent overall market share during 1988.

VTLS, Inc.

Like NOTIS, VTLS recently experienced the process of moving into the private sector as an independent company. Last year was a period of metamorphosis for VTLS as it experienced a 75 percent growth in staff, saw a 100 percent increase in gross revenues, and prepared to move to a new corporate headquarters. VTLS has established the most aggressive industry goal for 1988—a minimum growth of 100 percent as compared to 1987.

The marketplace remains healthy and continues to show unlimited growth potential. A later article will take a closer look at these mainstream companies, their products, services, and customers.

Source List

Advanced Libs. & Information, Inc.
2570 S. Beretania St.
Honolulu, HI 96826
808-947-4441

CALS Services Group, Ltd.
133 McKinstry Dr.
Elgin, IL 60120

Carlyle Systems Inc.
5750 Hollis St.
Emeryville, CA 94608
800-274-4274

Centel Information, Inc.
(formerly Sigma Data Servs.)
12730 Twinbrook Pkwy.
Rockville, MD 30852
301-984-3636
800-843-4850

Centennial College
The Bibliocentre
80 Cowdray Ct.
Scarborough, Ontario
Canada M1S 4N1

CLSI, Inc.
320 Nevada St.
Newtonville, MA 02160
800-225-3076

Comstow Info. Servs.
302 Boxboro Rd.
Stow, MA 01775-1161
617-897-7163

Data Research Assocs., Inc.
1276 N. Warson Rd.
St. Louis, MO 63132-1806
800-325-0880 (US)
800-331-3515 (Canada)

Data Trek, Inc.
167 Saxony Rd.
Encinitas, CA 92024
619-436-5055

Dougherty County PL
300 Pine Ave.
Albany, GA 31701-2533
912-431-2900

DYNIX, Inc.
151 E. 1700 S.
Provo, UT 84601
801-375-2770

Easy Data Systems, Inc.
401-1200 Lonsdale Ave.
N. Vancover, B.C.
Canada V7M 3H6
604-986-8261

Eyring Research Inst., Inc.
5280 S. 300 W., Suite E. 260
Salt Lake City, UT 84017
801-263-9200

F.W. Faxon Company
15 Southwest Park
Westwood, MA 02090
617-329-3350

Follett Software Company
4506 Northwest Hwy.
Crystal Lake, IL 60014
800-323-3397

Gaylord Brothers
Library Automation
PO Box 4901
Syracuse, NY 13221
315-457-5070

Geac Computers, Inc.
350 Steelcase Rd. W.
Markham, Ontario
Canada L3R 1B3
416-475-0525

Georgetown University
Dahlgren Memorial Library
3900 Reservoir Rd. NW
Washington, DC 20007
202-625-7673

H.C.E. Library Automation Systems
PO Box 18265
Fort Worth, TX 76180
817-498-6350

IBM (DOBIS)
Library Marketing
472 Wheelers Farms Rd.
Milford, CT 06460
203-783-7000

Information Access Corp.
11 Davis Drive
Belmont, CA 94002
415-591-2333

Information Dimensions
655 Metro Place S., Suite 500
Dublin, OH 43017-1396
614-761-8083
800-DATA-MGT

INLEX, Inc.
1900 Garden Rd.
Monterey, CA 93942
800-553-1202

Innovative Interfaces
2344 Sixth St.
Berkeley, CA 94710
800-444-2344

Library Automation Prods.
875 Ave. of the Americas
New York, NY 10001
212-967-7440

Library Corp. of America
(The Intelligent Catalog)
PO Box 40035
Washington, DC 20016
800-624-0559

Library Systems & Services, Inc.
20251 Century Blvd.
Germantown, MD 20874
800-638-8725

Midland Public Library
Dow Memorial Library
1710 W. St. Andrews Dr.
Midland, MI 48640
517-835-7151

Municipal Software Consultants, Inc.
212 E. Franklin St.
Grapevine, TX 76051
817-488-6571

New Age Office Systems
d/b/a New Age/Orbit
798 21st Ave.
Albany, GA 31701
912-888-3986

NOTIS Systems, Inc.
1007 Church St., 2d fl.
Evanston, IL 60201-3622
312-866-0150

OCLC, Inc. (LC/2000)
Local Systems Division
6565 Frantz Rd.
Dublin, OH 43017
800-848-5878

Pennsylvania State University
LIAS Program Office
E. 511 Pattee Library
University Park, PA 16802
814-865-1858

Philsom Network
Washington University
School of Medicine Library
660 S. Euclid Ave.
St. Louis, MO 63110
314-362-2788

Pike's Peak Library District
(Maggie's Place)
20 N. Cascade Ave.
PO Box 1579
Colorado Springs, CO 80901
303-473-2080, x241

Pueblo Library District
100 E. Abriendo Ave.
Pueblo, CO 81004
303-544-1940

Ringgold Management Systems
PO Box 368
Beaverton, OR 97075-0368
503-645-3502

Sedna Corporation
PO Box 22436
Minneapolis, MN 55422
612-535-2326

Sigma Data Services Corp.
(See Centel Information)

SIRSI Corporation
2904 Westcorp Blvd.
Huntsville, AL 35805
205-536-5881

Sobeco Group (Multilis)
505 boul. Rene Levesque W.
Montreal, Quebec
Canada H2Z 1Y7
514-878-9090

Sydney Development Corp.
1385 W. Eighth Ave.
Vancouver, B.C.
Canada V6H 3V9
604-734-8822

Systems Control, Inc.
PO Box 10025
Palo Alto, CA 94303
415-494-1165

Systemshouse Limited
2827 Riverside Drive
Ottawa, Ontario
Canada K1V 0C4
613-526-0670

Tarrant Cty. Jr. Coll. Dist.
1400 Electric Service Bldg.
Fort Worth, TX 76102

Unisys
Public Sector Marketing
PO Box 500
Blue Bell, PA 19424
215-542-4011

Universal Library Systems (ULISYS)
1609-F Broadway
Bellingham, WA 98225
206-733-1732

Univ. of Wisconsin Lib.
728 State St.
Madison, WI 53706
608-262-2600

Utlas
80 Bloor St. W., 2d fl.
Toronto, Ontario
Canada M5S 2V1
416-923-0890

VTLS, Inc.
1800 Kraft Dr.
Blacksburg, VA 24060
703-953-3605

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LIBRARY JOURNAL

APRIL 15, 1988

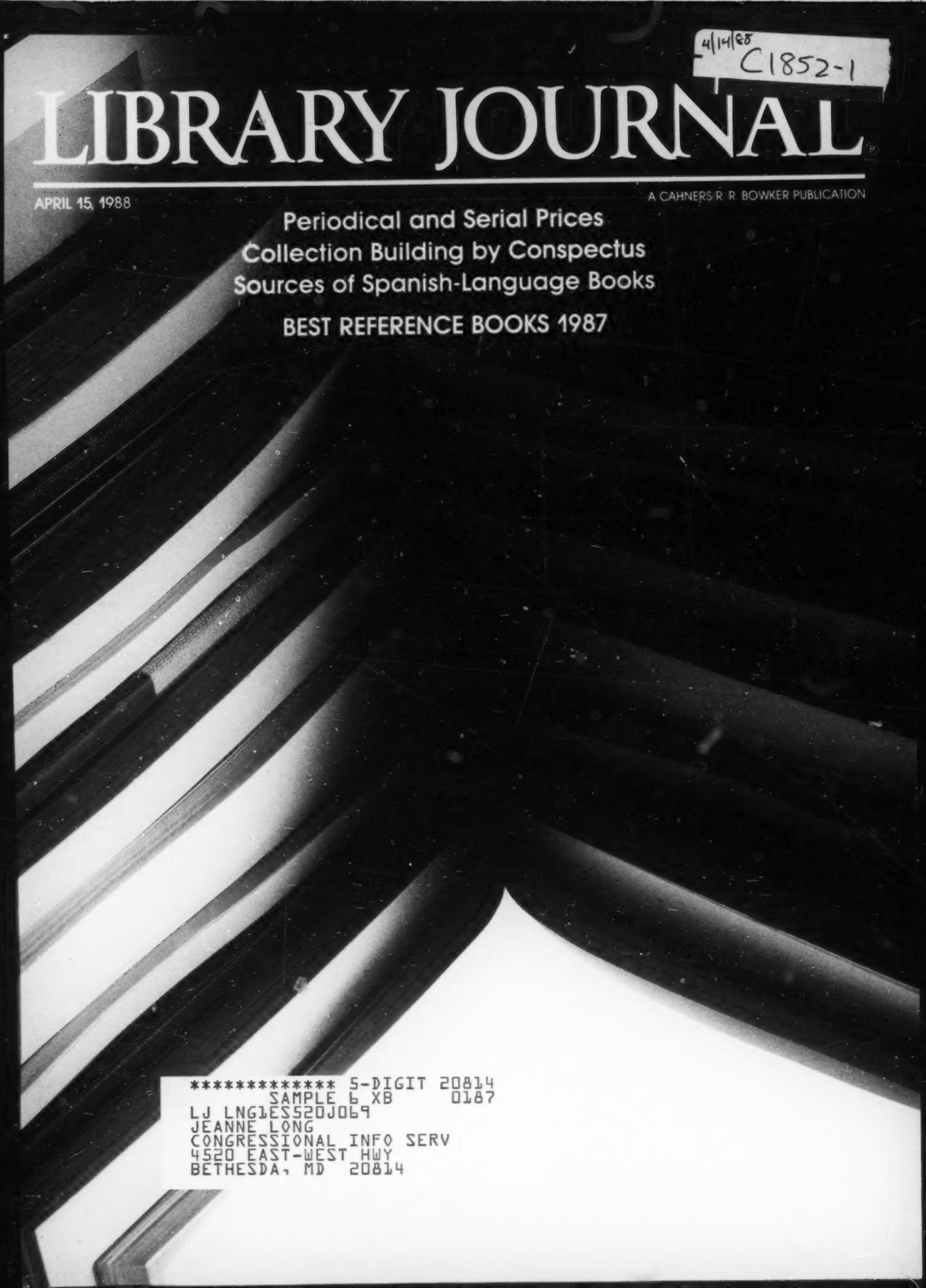
A CAHNERS/R R BOWKER PUBLICATION

Periodical and Serial Prices

Collection Building by Conspectus

Sources of Spanish-Language Books

BEST REFERENCE BOOKS 1987



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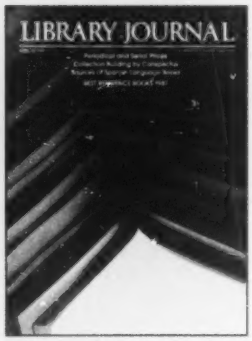

Bringing information into focus is the challenge of reference work and reference works. "Reference Books of 1987" (p. 29-34) will help librarians meet the challenge. Photograph by Peter Neumann

Letters 6
Calendar 12
People 26
Professional Reading 62
Checklist 64
Magazines 66
AV Reviews & Distributors 68
Classified 104
Index to Advertisers 112

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FEATURES

Reference Books of 1987 29
LJ's annual selections / by Janet Fletcher, Francine Fialkoff, Barbara Hoffert, & Jeanne Lance

Price Index for 1988: U.S. Periodicals 35
Periodical prices updated / by Leslie C. Knapp & Rebecca T. Lenzini

Price Index for 1988: U.S. Serial Services 41
A budget information service reinstituted / by Mary Elizabeth Clack

Building Collections Together: the Pacific Northwest Conspectus 43
Cooperative collection development / by Peggy Forcier

Improving Library Services to the Aging 46
Specific responses to special needs / by Bessie B. Moore & Carol Fraser Fisk

Spanish-Language Books: a Source List 48
Where to buy needed books / compiled by Daniel Josslin

The Practicing Librarian 52
The Quality Circle: Catalyst for Library Change / by Janice DeSirey, Christopher Dodge, Nancy Hargrave, Randi Larson, & Susan Nesbitt; Buried Alive in Gifts / by Veneese C. Nelson; Teaching Literacy Training by Steven D. Peck

COLUMNS

How Do You Manage?: *Our's Not To Reason Why* 57
by A.J Anderson; The Analyses: Margaret R. Blue & Harriet Gruber

White Papers: *Managing Libraries and the Societal Good* 60
by Herbert S. White

EDITORIAL

The Crucial Relationship 4
The library director relates to the board chair

LATE BULLETINS 15

NEWS 16

FBI presents its case to NCLIS / New info packet from ALA's D.C. office / Oregon students demonstrate for university library support / The Permanent Paper Honor Roll / Archive on homosexuality donated to Cornell / Demise of plans for new British Library / Book Notes / Video rental fees exemption possible in Md. / First "Memo of the Month" in Alarums & Diversions

BOOK REVIEW 73

David Grossman's *The Yellow Wind* p. 73 / May Sarton's *After the Stroke: a journal* p. 82 / Czeslaw Milosz's *The Collected Poems 1931–1987* p. 83 / Stephen W. Hawking's *A Brief History of Time: from the Big Bang to black holes* p. 87 / Amos Oz's *Black Box* p. 95 / Reynolds Price's *Good Hearts* p. 96 / John Updike's *S.* p. 97 / and more . . .

The 28th annual survey of U.S. periodical prices

Price Index for 1988: U.S. Periodicals

By Leslie C. Knapp & Rebecca T. Lenzini

THIS SURVEY of U.S. periodical prices is sponsored by the Library Materials Price Index Committee of the Resources Section of the American Library Association, Resources and Technical Services Division and marks the fourth year since The Faxon Company has assumed responsibility for its production.

Faxon specializes in providing automated subscription services to libraries and other clients worldwide. Because of the company's long history of interest in trends in serials prices, company representatives have often served as consultants to the Library Materials Price Index Committee.

Suspended by the committee in 1985 for reevaluation of scope and usefulness, the U.S. Serial Services Index reappears here on page 41 under the authorship of Mary Elizabeth Clack, serial records librarian at Harvard College. The Library Materials Price Index Committee, in conjunction with Faxon, has developed criteria for this index that more closely meet those established in ANSI Z39.20-1983.[1] Faxon also provides price data for this periodicals report.

Purpose, scope, & methodology

The purpose of this index and accompanying tables and analysis remains unchanged from previous years: to provide information useful to librarians and others who must prepare annual budget requests for serials, and to document periodical price indexes each year for those interested in monitoring price trends for library materials.

The scope insures that each periodical included in the index must be published in the United States, must be priced, and must meet the criteria established in ANSI Z39.20-1983. This standard defines a periodical as a "publication that constitutes one issue in a continuous series under the same title, published more than once a year over an indefinite period, with individual issues in the series numbered consecutively or with each issue dated. Newspapers are excluded."

Serial services, microform editions, and electronic journals are also excluded. Periodicals that change title are considered to be the same publication if volume numbering remains continuous. The index continues to be based on the same titles and subject categories as in previous years.

Subscription prices for 1988 are taken from Faxon's online rate file as of January 31, 1988: publishers' list prices for the 1988 subscription year as supplied directly to Faxon by the

Leslie C. Knapp is Librarian, Shawmut Bank, N.A., Boston, and Rebecca T. Lenzini is Vice President and Director, Academic Information Services, The Faxon Company, Westwood, Massachusetts. The authors acknowledge with much gratitude the assistance of the following people in the preparation of this report: Barbara Celeste, Robert Davidson, Jane Harris, Marcia Jenkins, Perkunas Krukonis, Jeanne Lestan, Shelley Litwack, Ann Scherma, Judith Uchman, and the staff of Faxon's Publisher Services Department

Table I: Subject Categories in Rank Order by Average Subscription Price for 1988

Rank 1986	Rank 1987	Rank 1988	Category	Average Subscription Price, 1988
1	1	1	Soviet Translations	$592.22
2	2	2	Chemistry & Physics	329.99
3	3	3	Medicine	180.67
4	4	4	Mathematics, etc.	159.33
5	5	5	Zoology	127.33
6	6	6	Engineering	114.83
7	7	7	Psychology	100.57
8	8	8	Sociology & Anthropology	64.27
11	11	9	Home Economics	54.73
10	10	10	Business & Economics	53.89
9	9	11	Journalism & Communications	53.39
12	12	12	Library & Information Sciences	51.61
13	13	13	Education	47.95
14	14	14	Industrial Arts	44.20
17	17	15	Labor & Industrial Relations	44.05
16	16	16	Law	43.33
15	15	17	Political Science	41.55
18	18	18	Agriculture	33.56
19	19	19	Fine & Applied Arts	32.43
21	21	20	History	30.16
22	22	21	Physical Education & Recreation	28.60
20	20	22	General Interest Periodicals	28.29
23	23	23	Literature & Language	28.04
24	24	24	Philosophy & Religion	27.09
25	25	25	Children's Periodicals	16.39
			U.S. Periodicals Index Excluding Soviet Translations	$77.93
			U.S. Periodicals Index Including Soviet Translations	$105.45

Table II: Subject Categories in Rank Order by Percentage of Increase of 1988 Average Subscription Price over 1987

Rank 1986	Rank 1987	Rank 1988	Category	Percent Increase 1987 over 1986	Percent Increase 1988 over 1987
10	21	1	Labor & Industrial Relations	4.1	14.0
1	10	2	Zoology	9.8	12.8
2	17	3	Home Economics	6.8	12.5
3	6	4	Chemistry & Physics	11.4	12.2
6	4	5	Engineering	11.7	11.0
9	15	6	Education	7.0	10.7
11	7	7	Soviet Translations	11.3	10.2
7	9	8	Psychology	10.0	9.3
21	19	9	History	6.1	9.1
2	3	9	Mathematics, etc.	12.4	9.1
16	11	10	Law	9.3	8.8
4	12	11	Agriculture	8.4	7.8
17	8	11	Children's Periodicals	10.4	7.8
13	17	12	Physical Education & Recreation	6.8	7.2
15	22	13	Literature & Language	4.0	7.0
12	16	14	Business & Economics	6.9	6.9
5	5	15	Medicine	11.6	6.7
1	20	16	Industrial Arts	4.3	6.6
13	2	16	Library & Information Sciences	13.1	6.6
3	14	16	Sociology & Anthropology	7.1	6.6
14	13	17	Fine & Applied Arts	8.1	6.0
19	24	18	Philosophy & Religion	3.0	5.8
18	18	19	Journalism & Communications	6.6	5.4
8	1	20	Political Science	13.5	4.0
20	23	21	General Interest Periodicals	3.1	1.8
			U.S. Periodicals Index Excluding Soviet Translations	9.9	9.1
			U.S. Periodicals Index Including Soviet Translations	10.3	9.4

Table III: Average of Average Annual Percentages of Increase Since 1979 by Broad Subject Categories (Excluding Soviet Translations)

GENERAL INTEREST & CHILDREN'S PERIODICALS	
General Interest	5.1
Children's	10.5
BOTH CATEGORIES*	7.8
HUMANITIES	
Fine & Applied Arts	7.2
Literature & Language	8.2
Philosophy & Religion	8.4
ALL HUMANITIES CATEGORIES	7.9
SOCIAL SCIENCES	
Business & Economics	10.0
Education	9.3
History	8.4
Journalism	9.5
Labor & Industrial Relations	12.3
Law	8.4
Library & Information Sciences	10.8
Physical Education & Recreation	9.9
Political Science	10.2
Psychology	11.4
Sociology & Anthropology	11.8
ALL SOCIAL SCIENCES CATEGORIES*	10.2
SCIENCE & TECHNOLOGY	
Agriculture	10.1
Chemistry & Physics	12.1
Engineering	11.6
Home Economics	10.2
Industrial Arts	10.9
Mathematics, etc.	11.7
Medicine	12.4
Zoology	13.8
ALL SCIENCE & TECHNOLOGY CATEGORIES*	11.6
U.S. PERIODICALS INDEX Excluding Soviet Translations	11.1

* Simple average, not weighted average

publishers and that are applicable to college and university libraries in the United States. Service charges and any Faxon discounts are excluded.

The 1988 prices for the 49 titles not available through Faxon because of publisher policy were obtained from phone calls to the individual publishers. Prices of the 47 titles that are listed in Faxon's online title file as suspended, delayed, slow, or "status-in-question," and for which Faxon made no payment to the publisher for 1988, are simply carried forward.

Each of the 47 titles that does not resume on-schedule publication during 1988 will be dropped from the 1989 index. No secondary sources of price information were consulted. (Although the method used for obtaining prices does not comply completely with ANSI Z39.20-1983, the Library Materials Price Index Committee has approved it as a satisfactory substitute.)

A total of 101 titles—including one Soviet translation—were dropped from the 1988 index for any of the following reasons: they are suspended, delayed, slow, or "status-in-question," and Faxon made no payment to the publisher for 1987 or 1988; they are free or not available on an annual subscription basis; or they are no longer published in the United States.

To replace the dropped titles, others were added using criteria established by the committee at the 1985 ALA Midwinter Meeting.

> Titles to be added should meet the definition of periodicals in the ANSI Standard, having a starting date of 1981 or later, and be selected to replace a title of the same subject category as listed in the former index. Titles should be added on a one-to-one basis, one for each title dropped. In categories where there were more titles eligible to be added than the number dropped, the titles to be added would be selected on the basis of a ranked list, ranked in order of titles with the largest number of subscriptions placed with Faxon.

Based on these criteria, 101 titles were added to the 1988 index. These were selected from Faxon's INFOSERV: New & Revised Serial Titles database; Faxon's online title file; and *Ulrich's International Periodicals Directory, 1987–1988*.

The INFOSERV database lists new serials beginning publication within the last three years (as well as serials that have changed title or are forthcoming). Among other points of access, INFOSERV can be searched by LC subject classification codes, keyword or groups of terms, and date

of first issue. In cases in which the publisher of a periodical published in more than one country, place of publication was determined by checking the MARC-S (LC serials cataloging records in machine-readable form) file in Faxon's online system.

If the first place of publication listed in the MARC record was not located in the United States, the title was not included in the group of titles eligible to be used as replacements for dropped titles. (This method of confirming that a periodical is published in the United States also was used in identifying titles to be dropped.)

The average subscription price and price index for each subject category and for all subject categories combined ("U.S. Periodicals") were obtained using the methods specified in ANSI Z39.20-1983.

- In each subject category, the total annual subscription price to libraries of the titles for the year shall be divided by the number of titles in each category.
- Each of the average prices shall be divided by average price for the base period and multiplied by 100, subject category by category, to arrive at the price index for each category.
- The total annual subscription price of the titles shall be divided by the number of titles for the year to arrive at the average annual subscription price per title.
- The average subscription price for the year shall be divided by the average price for the base period and multiplied by 100 to yield the price index.

1988 highlights

Serial prices continue to climb, but at a slower rate than in previous years. The average subscription price of a U.S. periodical in 1988 is $77.93, up $6.52 from $71.41 in 1987. This year's average percentage increase in U.S. periodicals prices exluding Soviet translations declined to 9.1 percent from 9.9 percent, reversing the upward trend begun in 1985. The sample size for each year is 3,741 titles.

Based on a sample of 3,942 titles, the average price of U.S periodicals including Soviet Translations is $105.45, up just over $9 from $96.36 last year. The average percentage increase in U.S. periodicals prices including Soviet Translations declined nearly one percentage point to 9.4 percent from 10.3 percent. This year, 97 percent of the 211 titles in the Soviet Translations category increased in price (Table VII).

In 1988, the U.S. Periodical Index (USPI) continues to outstrip the Consumer Price Index. For the following comparision, CPI numbers (1967=100) were converted to the same base year as the USPI (1977=100). The actual CPI numbers are noted in parentheses.[2]

As Chart A indicates, this year U.S. periodicals prices including Soviet Translations increased more than 2.5 times the U.S. rate of inflation. Last year, 1987 prices rose at a rate more than five times the U.S. rate of inflation. Since all the reasons for this upward trend remain to be

Chart A: CPI vs. USPI

	Index			% Increase Over Previous Year		
	CPI	USPI excl. Sov.Trans.	USPI incl. Sov.Trans.	CPI	USPI excl. Sov.Trans.	USPI incl. Sov.Trans.
1986	180.9 (328.4)	264.3	261.5	1.9	8.9	8.2
1987	187.5 (340.4)	290.4	288.3	3.7	9.9	10.3
1988	(Not yet avail.)	316.9	315.5	–	9.1	9.4

Table IV: Breakdown of Mathematics, etc. Category

Subcategory	No. of Titles			Average Price			% Increase		
	1986	1987	1988	1986	1987	1988	1986	1987	1988
Mathematics	69	71	73	$181.91	$199.73	$216.18	11.8	9.8	8.2
Earth Sciences (and 9 Geography titles)	65	63	63	86.55	97.85	106.25	8.7	13.1	8.6
Life Sciences	47	46	44	186.88	218.90	244.38	12.0	17.1	11.6
Botanical Sciences	29	29	29	67.00	72.48	76.90	7.0	8.2	6.1
General Science (and 5 Astronomy titles)	28	29	29	72.36	77.57	84.93	14.5	7.2	9.5
MATHEMATICS, ETC.	238	238	238	$129.95	$146.08	159.33	9.7	12.4	9.1

Table V: Percentage of Titles Increasing in Price Per Subject Category: Three-Year Comparison

Category	1986	1987	1988	Average 1986–88
Agriculture	21	24	27	24
Business & Economics	37	36	37	37
Chemistry & Physics	78	81	81	80
Children's Periodicals	21	37	23	27
Education	36	37	35	36
Engineering	45	54	46	48
Fine & Applied Arts	22	39	34	32
General Interest Periodicals	19	28	28	25
History	20	22	21	21
Home Economics	33	78	31	47
Industrial Arts	38	40	35	38
Journalism & Communications	29	39	32	33
Labor & Industrial Relations	30	34	34	33
Law	26	27	33	29
Library & Information Sciences	34	50	36	40
Literature & Language	30	31	35	32
Mathematics, etc.	63	59	55	59
Medicine	66	65	72	68
Philosophy & Religion	24	25	26	25
Physical Education & Recreation	28	23	28	26
Political Science	39	35	33	36
Psychology	71	73	67	70
Sociology & Anthropology	52	40	46	46
Soviet Translations	55	92	97	81
Zoology	57	46	52	52
U.S. PERIODICALS INDEX Excluding Soviet Translations	39	43	41	41
U.S. PERIODICALS INDEX Including Soviet Translations	40	45	44	43

* Data not available

Table VI: U.S. Periodicals (Including Soviet Translations) 1988 Average Prices by LC Classification Codes

Classification code		No. of Titles 1988	Average Price 1988	Average Price 1987	Percent Increase 1988/1987
A	General Works	113	$23.10	$21.29	8.5
B	Philosophy, Psychology, Religion	207	48.83	45.69	6.9
B-BD, BJ	Philosophy	37	48.64	45.86	6.1
BF	Psychology	77	82.49	77.92	5.9
BL-BX	Religion	93	21.05	19.91	5.7
C	Auxiliary Sciences of History	12	38.75	37.75	2.6
D	History: General & Old World	66	38.97	37.17	4.9
E-F	History: America	120	23.17	21.84	6.1
G	Geography, Anthropology, Recreation	154	56.42	50.98	10.7
G-GC	Geography, Oceanography	35	128.98	116.44	10.8
GN	Anthropology	19	72.56	69.81	3.9
GV	Recreation	92	26.79	24.67	8.6
	All other G codes	8	41.50	39.50	4.7
H	Social Sciences	574	58.46	53.90	8.5
H	General	29	58.86	51.98	13.2
HB-HC	Ec. theory, hist. & cond.	52	76.26	71.51	6.6
HD	Land, Agriculture, Industry	131	49.15	41.76	17.7
HE	Transportation & Communication	30	38.34	37.82	1.4
HF	Commerce	99	48.98	46.25	5.9
HG-HJ	Finance, Public finance	74	56.94	51.93	9.7
HM	Sociology (General)	29	94.50	87.25	8.3
HQ	Family, Marriage, Woman	41	78.13	73.23	6.7
HV	Social/public welfare, Criminology	47	67.26	64.82	3.8
	All other H codes	42	50.69	48.28	5.0
J	Political Science	78	45.61	44.28	3.0
K	Law	264	44.47	40.65	9.4
L	Education	183	45.12	40.47	11.5
M	Music	38	28.70	27.13	5.8
N	Fine Arts	76	34.24	32.44	5.5
P	Language and literature	225	32.41	30.83	5.1
P	Philology & linguistics	20	53.65	49.00	9.5
PN	Literary history	113	33.97	32.34	5.0
PR-PS	English lit., American lit.	42	21.53	20.64	4.3
	All other P codes	50	29.54	27.92	5.8
Q	Science	592	$320.22	$294.14	8.9
Q	Science (General)	40	119.27	99.55	19.8
QA	Mathematics	107	280.01	266.12	5.2
QB	Astronomy	16	317.12	268.12	18.3
QC	Physics	100	482.61	432.34	11.6
QD	Chemistry	80	459.99	431.10	6.7
QE	Geology	29	177.97	166.10	7.1
QH	Natural History (incl. Gen. Biol.)	81	329.67	296.82	11.1
QK	Botany	19	118.26	108.16	9.3
QL	Zoology	53	190.08	174.69	8.8
QP	Physiology	47	290.74	261.05	11.4
QR	Microbiology	20	342.75	327.65	4.6
R	Medicine	276	116.51	108.97	6.9
R	Medicine (General)	36	123.78	119.90	3.2
RA	Public aspects of medicine	34	115.12	113.71	1.2
RC	Internal medicine	105	118.92	108.96	9.1
RD	Surgery	22	100.05	93.41	7.1
RM	Therapeutics, Pharmacy	20	109.75	99.24	10.6
	All other R codes	59	117.02	109.41	7.0
S	Agriculture	215	46.45	42.52	9.2
S	Agriculture (General)	70	54.19	50.04	8.3
SB	Plant culture	48	46.65	43.79	6.5
SF	Animal culture	72	33.89	29.36	15.4
	All other S codes	25	60.50	57.67	4.9
T	Technology	391	135.61	119.06	13.9
T	Technology (General)	28	103.44	96.96	6.7
TA	Engineering, Civil engineering	69	219.09	205.15	6.8
TD	Envir. tech., Sanit. eng.	27	107.76	97.43	10.6
TH	Building construction	25	56.14	48.75	15.2
TJ	Mechanical eng. & machinery	59	194.67	172.75	12.7
TK	Electric. eng., Electronics	58	163.89	137.92	18.8
TL	Motor vehicle, Aeron., Astronaut.	30	67.63	65.71	2.9
TN	Mining engineering, Metallurgy	42	257.73	221.48	16.4
TP	Chemical technology	85	190.09	158.80	19.7
TS	Manufactures	64	58.25	53.47	8.9
TT	Handicrafts, Arts & Crafts	32	22.80	22.09	3.2
TX	Home Economics	42	42.37	39.27	7.9
	All other T codes	30	52.30	48.10	8.7
U-V	Military Science, Naval Science	23	26.20	25.02	4.7
Z	Bibliography, Library Science	130	60.67	56.33	7.7

identified, it is clear that factors other than the general inflation rate must be considered when tracking price increases for U.S. periodicals.

Table I ranks the average subscription prices of the 25 subject categories in the periodicals index. The range of prices extends from a low of $16.39 for Children's Periodicals to a high of $592.22 for Soviet Translations.

Grouping the subject categories into dollar ranges results in the following breakdown:

Under $20	One category
$20—$29	Four categories
$30—$39	Three categories
$40—$49	Five categories
$50—$59	Four categories
$60—$69	One category
$100–$149	Three categories
$150–$199	Two categories
Over $300	Two categories

No major shifts have occurred in the rankings over the past three years; however, there are now two categories over $300 and five between $100 and $200.

The comparative ranking of the 25 subject categories by percentage increases in average subscription prices for 1986–1988 (Table II) again follows no real pattern. For example, Labor and Industrial Relations with the highest percentage increase this year at 14 percent ranked 21st last year with a 4.1 percent increase. Political Science, which was ranked number one last year with a 13.5 percent increase over 1986, ranks 20th this year with only a four percent increase.

Grouping the subject categories into percentage increase ranges results in the following breakdown:

Under 5 percent	Two categories
5.0–6.9 percent	Eight categories
7.0–9.9 percent	Eight categories
10 percent+	Seven categories

Table III details the averages of the average annual percentage increases since 1979 organized by broad subject categories. Although totals for the four broad categories are simple averages and not weighted averages, the figures may prove useful for general budgeting purposes.

In 1988, Science and Technology (seven categories) remains in first place with an average increase of 11.6 percent. Social Sciences (11 categories) is again in second place with an average increase of 10.2 percent. The averages for Humanities (three categories) and General Interest and Chil-

dren's Periodicals remain lower at 7.9 and 7.8 percent respectively, but have in fact decreased from 8.7 and 7.9 percent respectively.

Almost equal to last year's figure of 11.2 percent, the average of average annual percentage increases for all U.S periodicals is 11.1 percent (Soviet Translations have been excluded because the titles in that category fall into more than one broad category).

Because the category of Mathematics, Botany, Geology, and General Science covers such a wide range of subjects, Table IV provides a breakdown of this category into five subcategories that range from a low of 6.1 percent for Botanical Sciences to a high of 11.6 percent for Life Sciences, which also had the highest percentage increase in 1987. Average prices of Life Sciences titles have increased more than $25 to $244.38, while those in Mathematics have risen $16.45 to $216.18. The prices of titles in Earth Sciences, Botanical Sciences, and General Sciences now range between $75 and $110. The average percentage increase for the

Table VII: U.S. Periodicals: 1977–1988
Index of 100.0 Equivalent to Average Prices for 1977
Parenthetical information applies to 1988

Year	No. of Titles	Average Price	Percent Increase	Index
U.S. PERIODICALS Excluding Soviet Translations (100 titles dropped; 100 added; 41% of the titles increased in price)				
1977	3,218	24.59	--	100.0
1980	3,358	34.54	13.7	140.5
1981	3,425	39.13	13.3	159.1
1982	3,544	44.80	14.5	182.2
1983	3,674	50.23	12.1	204.3
1984	3,731	54.97	9.4	223.5
1985	3,731	59.70	8.6	242.8
1986	3,731	65.00	8.9	264.3
1987	3,731	71.41	9.9	290.4
1988	3,731	77.93	9.1	316.9
U.S. PERIODICALS Including Soviet Translations (101 titles dropped; 101 added; 44% of the titles increased in price)				
1977	3,418	33.42	--	100.0
1980	3,555	45.35	13.3	135.7
1981	3,629	51.20	12.9	153.2
1982	3,750	58.72	14.7	175.7
1983	3,881	65.74	12.0	196.7
1984	3,942	72.47	10.2	216.8
1985	3,942	80.78	11.5	241.7
1986	3,942	87.38	8.2	261.5
1987	3,942	96.36	10.3	288.3
1988	3,942	105.45	9.4	315.5
AGRICULTURE (3 titles dropped; 3 added; 27% of the titles increased in price)				
1977	138	11.58	--	100.0
1980	143	15.24	7.6	131.6
1981	146	17.24	13.1	148.9
1982	149	19.76	14.6	170.6
1983	150	21.27	7.6	183.7
1984	153	24.06	13.1	207.8
1985	153	26.05	8.3	225.0
1986	153	28.71	10.2	248.0
1987	153	31.14	8.4	268.9
1988	153	33.56	7.8	289.8
BUSINESS & ECONOMICS (4 titles dropped; 4 added; 37% of the titles increased in price)				
1977	236	18.62	--	100.0
1980	240	25.42	10.7	136.5
1981	249	28.88	13.6	155.1
1982	253	32.67	13.1	175.5
1983	257	35.67	9.2	191.6
1984	262	38.87	9.0	208.8
1985	262	44.41	14.3	238.5
1986	262	47.15	6.2	253.2
1987	262	50.39	6.9	270.6
1988	262	53.89	6.9	289.4
CHEMISTRY & PHYSICS (3 titles dropped; 3 added; 81% of the titles increased in price)				
1977	135	93.76	--	100.0
1980	154	137.45	16.2	146.6
1981	163	156.30	13.7	166.7
1982	165	177.94	13.8	189.8
1983	167	207.94	16.9	221.8
1984	170	228.90	10.1	244.1
1985	170	238.43	4.2	254.3
1986	170	264.05	10.7	281.6
1987	170	294.05	11.4	313.6
1988	170	329.99	12.2	352.0
CHILDREN'S PERIODICALS (4 titles dropped; 4 added; 23% of the titles increased in price)				
1977	67	5.82	--	100.0
1980	68	7.85	17.2	134.9
1981	71	8.56	9.0	147.1
1982	76	9.90	15.7	170.1
1983	78	11.49	16.1	197.4
1984	78	12.21	6.3	209.8
1985	78	13.31	9.0	228.7
1986	78	13.76	3.4	236.4
1987	78	15.19	10.4	239.7
1988	78	16.39	7.8	281.5
EDUCATION (4 titles dropped; 4 added; 35% of the titles increased in price)				
1977	168	17.54	--	100.0
1980	183	23.45	8.5	133.7
1981	184	25.18	7.4	143.6
1982	190	28.18	11.9	160.7
1983	199	31.36	11.3	178.8
1984	203	34.01	8.5	193.9
1985	203	37.81	11.2	215.6
1986	203	40.47	7.0	230.7
1987	203	43.30	7.0	246.9
1988	203	47.95	10.7	273.4
ENGINEERING (14 titles dropped; 14 added; 46% of the titles increased in price)				
1977	235	35.77	--	100.0
1980	234	49.15	14.4	137.4
1981	241	54.55	11.0	152.5
1982	248	61.54	12.8	172.0
1983	265	73.18	18.9	204.6
1984	265	78.70	7.5	220.0
1985	265	84.38	7.2	235.9
1986	265	92.66	9.8	259.0
1987	265	103.49	11.7	289.3
1988	265	114.83	11.0	321.0
FINE & APPLIED ARTS (3 titles dropped; 3 added; 34% of the titles increased in price)				
1977	141	13.72	--	100.0
1980	139	18.67	7.2	136.1
1981	140	20.51	9.9	149.5
1982	142	23.35	13.8	170.2
1983	145	25.17	7.8	183.5
1984	145	26.90	6.9	196.1
1985	145	27.03	0.5	197.0
1986	145	28.28	4.6	206.1
1987	145	30.58	8.1	222.9
1988	145	32.43	6.0	236.3
GENERAL INTEREST PERIODICALS (7 titles dropped; 7 added; 28% of the titles increased in price)				
1977	161	16.19	--	100.0
1980	170	19.87	8.7	122.7
1981	172	21.83	9.9	134.8
1982	176	23.93	9.6	147.8
1983	177	26.43	10.4	163.2
1984	181	27.90	5.6	172.3
1985	181	26.41	-5.3	163.1
1986	181	26.95	2.0	166.4
1987	181	27.79	3.1	171.7
1988	181	28.29	1.8	174.7
HISTORY (7 titles dropped; 7 added; 21% of the titles increased in price)				
1977	138	12.64	--	100.0
1980	143	15.77	7.5	124.8
1981	143	17.96	13.9	142.1
1982	143	20.37	13.4	161.2
1983	151	22.43	10.1	177.5
1984	151	23.68	5.6	187.3
1985	151	25.55	7.9	202.1
1986	151	26.04	1.9	206.0
1987	151	27.64	6.2	218.7
1988	151	30.16	9.1	238.6
HOME ECONOMICS (6 titles dropped; 6 added; 31% of the titles increased in price)				
1977	74	18.73	--	100.0
1980	78	24.63	6.1	131.5
1981	79	27.34	11.0	146.0
1982	84	34.27	25.3	183.0
1983	88	35.68	4.1	190.5
1984	90	37.15	4.1	198.3
1985	90	41.04	10.5	219.1
1986	90	45.59	11.1	243.4
1987	90	48.67	6.8	259.9
1988	90	54.73	12.5	292.2

Table VII (Continued): U.S. Periodicals: 1977–1988
Index of 100.0 Equivalent to Average Prices for 1977
Parenthetical information applies to 1988

INDUSTRIAL ARTS
(3 titles dropped; 3 added; 35% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	87	14.37	--	100.0
1980	91	20.70	17.3	144.1
1981	91	22.62	9.3	157.4
1982	99	27.13	19.9	188.8
1983	104	28.83	6.3	200.6
1984	106	30.40	5.4	211.6
1985	106	35.09	15.4	244.2
1986	106	39.75	13.3	276.6
1987	106	41.45	4.3	288.4
1988	106	44.20	6.6	307.6

JOURNALISM & COMMUNICATIONS
(4 titles dropped; 4 added; 32% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	85	16.97	--	100.0
1980	83	27.34	14.6	161.1
1981	85	29.80	9.0	175.6
1982	86	33.91	13.8	199.8
1983	88	37.39	10.3	220.3
1984	90	39.25	5.0	231.3
1985	90	46.08	17.4	271.5
1986	90	47.54	3.2	280.1
1987	90	50.66	6.6	298.5
1988	90	53.39	5.4	314.6

LABOR & INDUSTRIAL RELATIONS
(4 titles dropped; 4 added; 34% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	61	11.24	--	100.0
1980	64	18.84	19.7	167.6
1981	65	21.68	15.1	192.9
1982	65	24.72	14.0	219.9
1983	69	29.22	18.2	260.0
1984	70	29.87	2.2	265.7
1985	70	34.75	16.3	309.2
1986	70	37.14	6.9	330.4
1987	70	38.65	4.1	343.9
1988	70	44.06	14.0	392.0

LAW
(5 titles dropped; 5 added; 33% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	229	17.36	--	100.0
1980	240	23.00	9.6	132.5
1981	242	24.80	7.8	142.9
1982	255	27.53	11.0	158.6
1983	267	29.66	7.7	170.9
1984	273	31.31	5.6	180.4
1985	273	35.13	12.2	202.4
1986	273	36.44	3.7	209.9
1987	273	39.82	9.3	229.4
1988	273	43.33	8.8	249.6

LIBRARY & INFORMATION SCIENCES
(0 titles dropped; 0 added; 36% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	89	16.97	--	100.0
1980	97	23.25	11.7	137.0
1981	103	28.47	22.5	167.8
1982	111	33.52	17.7	197.5
1983	117	36.72	9.5	216.4
1984	118	38.85	5.8	228.9
1985	118	40.66	4.7	239.6
1986	118	42.82	5.3	252.4
1987	118	48.42	13.1	285.3
1988	118	51.61	6.6	304.1

LITERATURE & LANGUAGE
(1 title dropped; 1 added; 35% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	138	11.82	--	100.0
1980	144	15.30	10.5	129.4
1981	146	17.30	13.1	146.4
1982	156	19.39	12.1	164.0
1983	157	21.19	9.3	179.3
1984	158	23.02	8.6	194.8
1985	158	24.18	5.0	204.6
1986	158	25.21	4.2	213.3
1987	158	26.21	4.0	221.7
1988	158	28.04	7.0	237.3

MATHEMATICS, BOTANY, GEOLOGY, & GENERAL SCIENCE
(3 titles dropped; 3 added; 55% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	185	47.13	--	100.0
1980	200	67.54	14.8	143.3
1981	206	75.62	12.0	160.4
1982	217	87.99	16.4	186.7
1983	228	97.26	10.5	206.4
1984	238	106.56	9.6	226.1
1985	238	116.93	9.7	248.1
1986	238	129.95	11.1	275.7
1987	238	146.08	12.4	310.0
1988	238	159.33	9.1	338.1

MEDICINE
(2 titles dropped; 2 added; 72% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	172	51.31	--	100.0
1980	172	73.37	15.9	143.0
1981	172	86.38	17.7	168.3
1982	172	102.87	19.1	200.5
1983	177	112.72	9.6	219.7
1984	182	125.57	11.4	244.7
1985	182	137.92	9.8	268.8
1986	182	151.77	10.0	295.8
1987	182	169.36	11.6	330.1
1988	182	180.67	6.7	352.1

PHILOSOPHY & RELIGION
(2 titles dropped; 2 added; 26% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	107	10.89	--	100.0
1980	110	14.73	11.2	135.3
1981	111	15.40	4.5	141.4
1982	117	17.92	16.4	164.6
1983	126	20.21	12.8	185.6
1984	130	21.94	8.6	201.5
1985	130	24.30	10.8	223.1
1986	130	24.85	2.3	228.2
1987	130	25.60	3.0	235.1
1988	130	27.09	5.8	248.8

PHYSICAL EDUCATION & RECREATION
(5 titles dropped; 5 added; 28% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	130	10.00	--	100.0
1980	136	13.83	12.7	138.3
1981	139	15.42	11.5	154.2
1982	142	16.91	9.7	169.1
1983	150	19.07	12.8	190.7
1984	151	20.54	7.7	205.4
1985	151	23.72	15.5	237.2
1986	151	24.78	5.3	249.8
1987	151	26.67	6.8	266.7
1988	151	28.60	7.2	286.0

POLITICAL SCIENCE
(8 titles dropped; 8 added; 33% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	123	14.83	--	100.0
1980	127	19.30	10.5	130.1
1981	128	22.69	17.6	153.0
1982	133	25.89	14.1	174.6
1983	136	28.97	11.9	195.3
1984	136	32.43	11.9	218.7
1985	136	32.72	0.9	220.6
1986	136	35.19	7.5	237.3
1987	136	39.95	13.5	269.4
1988	136	41.55	4.0	280.1

PSYCHOLOGY
(1 title dropped; 1 added; 67% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	110	31.74	--	100.0
1980	121	41.95	10.1	132.2
1981	125	47.27	12.7	148.9
1982	131	54.21	14.7	170.8
1983	136	59.31	9.4	186.9
1984	138	69.74	17.6	219.7
1985	138	76.34	9.5	240.5
1986	138	83.71	9.7	263.7
1987	138	92.05	10.0	290.0
1988	138	100.57	9.3	316.8

SOCIOLOGY & ANTHROPOLOGY
(4 titles dropped; 4 added; 46% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	128	19.68	--	100.0
1980	135	27.56	16.3	140.0
1981	136	31.37	13.8	159.4
1982	145	36.38	16.0	184.9
1983	149	40.54	11.4	206.0
1984	149	43.87	8.2	222.9
1985	149	50.87	16.0	258.5
1986	149	56.31	10.7	286.1
1987	149	60.29	7.1	306.4
1988	149	64.27	6.6	326.6

SOVIET TRANSLATIONS
(1 title dropped; 1 added; 97% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	200	175.41	--	100.0
1980	197	229.68	13.8	130.9
1981	204	253.79	10.5	144.7
1982	206	298.22	17.5	170.0
1983	207	341.04	14.4	194.4
1984	211	381.86	12.0	217.7
1985	211	453.47	18.8	258.5
1986	211	483.09	6.5	275.4
1987	211	537.54	11.3	306.4
1988	211	592.22	10.2	337.6

ZOOLOGY
(3 titles dropped; 3 added; 52% of the titles increased in price)

Year	No. of Titles	Average Price	Percent Increase	Index
1977	81	33.69	--	100.0
1980	86	44.58	11.0	132.3
1981	88	48.32	8.4	143.4
1982	89	61.07	26.4	181.3
1983	93	70.74	15.8	210.0
1984	94	78.35	10.8	232.6
1985	94	90.75	15.8	269.4
1986	94	102.83	13.3	305.2
1987	94	112.91	9.8	335.1
1988	94	127.33	12.8	378.0

whole category is 9.1 percent, a figure identical to that of the entire 1988 index excluding Soviet Translations.

Table V offers a three-year comparison of the percentage of titles increasing in price in each subject category. For 1988, 97 percent of Soviet Translations increased in price while only 21 percent of History titles underwent price increases. Over the three-year period, 81 percent of Soviet Translations increased in price edging out Chemistry and Physics, a category in which 80 percent of the titles increased in price for the same period. For 1988, these categories exhibit the highest average prices at $592.22 and $329.99 respectively.

Table VI provides a detailed subject breakdown of the titles in the periodicals index (including Soviet Translations) by one- and two-letter LC classification codes assigned to each title in Faxon's online title file. It also lists average prices for 1987 and 1988 as well as percentage increases.

Differences from 1987 range from the highest increase of 19.8 percent for Science (General) (LC Code Q) with an average price of $119.27, followed closely by a 19.7 percent increase in Chemical Technology titles (LC Code TP) with an average price of $190.09, to an increase of 1.2 percent for titles in the Public Aspects of Medicine (LC Code RA) with an average price of $115.17. This year there are no percentage decreases.

Table VII comprises the price indexes for U.S. Periodicals and for the 25 individual subject categories. For 1988, the base year was changed from 1978 to 1977. Including Soviet Translations, 44 percent of the titles increased in price. Excluding Soviet Translations, 41 percent of U.S. periodicals increased in price.

Faxon is aware that the average prices reported in these annual studies of 3,942 titles are consistently lower than those derived from Faxon's own studies of larger samples as well as from studies conducted by individual libraries of their serials collections. Percentages of increases are usually comparable, but prices actually paid by libraries are traditionally higher than those reported in the sample.

For these reasons and with the approval of the committee, Faxon is investigating the feasibility of basing the U.S. Periodicals Price Index on all U.S. titles contained in Faxon's online title database. Faxon will report its findings in this undertaking directly to the committee.

Responsibility for continuing the indexes for periodicals and serial services rests with ALA's Library Materials Price Index Committee. The current committee chair is Rebecca T. Lenzini, vice president and director, Academic Information Services, The Faxon Company, 15 Southwest Park, Westwood, MA 02090.

References

1. American Standards Institute. American National Standard for Library and Information Sciences and Related Publishing Practices—Library Materials—Criteria for Price Indexes. ANSI Z39.20-1983, New York, 1983.
2. The Consumer Price Index numbers (all urban consumers) for 1987 were obtained by phoning the U.S. Bureau of Labor Statistics, CPI Office, Washington, D.C. The actual CPI numbers (1967=100) were converted to a base year of 1977=100 by multiplying each index number by 100 and then dividing by the CPI for 1977 (181.5).

The 25th U.S. Serial Services Survey

Price Index for 1988: U.S. Serial Services

By Mary Elizabeth Clack

THIS IS THE 25th survey of U.S. serial services, the last produced by Norman Brown and Jane Phillips for 1984 prices (*LJ*, August 1984, p. 1422-25). In 1985, responsibility for production of the U.S. Periodicals and U.S. Serial Services Indexes was transferred to the American Library Association Resources and Technical Services Division—Resources Section Library Materials Price Index Committee working in conjunction with the Faxon Company.

Mary Elizabeth Clack is Serial Records Librarian, Harvard College Library

The U.S. Serial Services Index was not easily automated, since many of the prices for serial services are not in Faxon's database (these are prices for titles that must be ordered directly from publishers). In 1985 and 1986 the committee studied the index and surveyed acquisitions and collection development librarians and library financial officers to determine whether production of the index should continue. Over 50 percent of the respondents to the questionnaire stated that the index was an important tool and useful in the budgeting process.

The committee then decided to test produce the index in 1987 to see what problems would arise. In this process, it was noted that over 600 of the titles in the sample were not priced by Faxon and would have to be added manually. It was also noted that for some titles for which no "list price" is available, the price would have to be taken from a library's acquisition records. The third problem involved titles for which the "current edition" was actually published more than a year ago, but was still available and being sold at a 1988 price. (The committee voted to include these titles in the index with their current price.)